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Simulation & Realism = Efficiency



Simtech - Advanced Training & Simulations Systems Ltd..

Database has been designed on digital mapping information and aerial photographs produced by the
Federal Office of Topography, CH-3084 Wabern, Switzerland

Report Documentation Page			Form Approved OMB No. 0704-0188		
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE 02 SEP 2003		2. REPORT TYPE N/A		3. DATES COVERED -	
4. TITLE AND SUBTITLE Simulation & Realism = Efficiency				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) SimTech, Israel				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release, distribution unlimited					
13. SUPPLEMENTARY NOTES See also ADM001676, UAV 2002 conference & Exhibition., The original document contains color images.					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT UU	18. NUMBER OF PAGES 22	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			



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Training Limitations -

A compulsion to live with, or a
solvable issue?

UAV



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UAV team - To whom we apply?

- Pilots
- Observers
- Interpreters
- Other users: Front unit, Commanders, Artillery..
- Mission Commanders

UAV

Training goal:

Prepare the operators for live missions:

Technical skills:

- Personal skills sorted by individual profession
- Team work and collaboration
- Routine and emergency situation



Mission and tactical skills:

- General mission of the unit
- Specific mission

UAV

Set-Up traditional training

- Be prepared ASAP
- Short cycle -



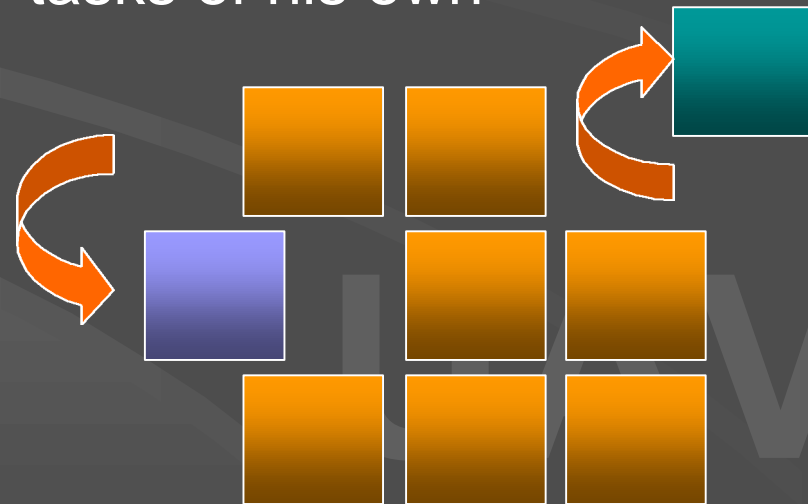
- Tools: OPT, UAV Models (Half scale), Real A/C

UAV

Common problems and restrictions

Different type of skills (Pilots, interpreters...)

Each one has many tasks of his own



Pilot :

Take off, landing, routine flight, environment conditions, emergencies, safety

Problems !

- Limited training (12 hr.) lack of experience
- Unexpected weather conditions, changes during flight
- Facing emergencies and malfunctions
- Training over limited flight corridors (routine familiar.)

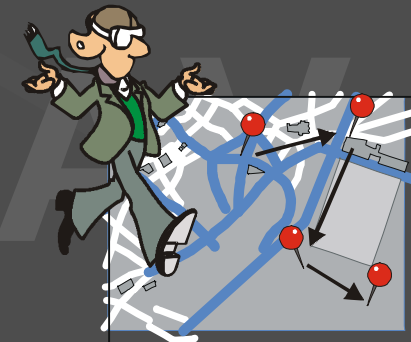


Observer :

Nav to point, variety of targets, tactical interpretation,
emergencies

Problems !

- Find appropriate training area (size, type, difficulties)
- Limited targets (no variety, flexibility level of difficulties)
- Lack of experience in sensors operation in various mode
- Successful co-ordination with pilot and other forces





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Mission commander :

Mission planning, doctrines, co-ordination, safety

Problems !

- Geographic and political restrictions
- Evaluate new doctrines, payloads, route etc.
- Operating among other forces,
- Air space integration

UAV



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School and training centers :

Time planning, certification, qualification, safety, saving...

Problems !

- Schedule ahead and courses planning (regulars, reservists, new..)
- Dependency on weather and time of day - Limited training hour
- Cost -
- Logistic - training set-up, bureaucracy, manpower (flight line crew)
- Risk
- Traffic control procedure - limited flight sectors, cumbersome co-ordination
- Training levels and courses (certify new operators, annual test...)
- Trainee evaluation - evaluation, rehearsal, playback, database

Well ...?





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What we really need?

- 24 hours training capabilities
- Unlimited flying zone
- Whole mission and emergencies
- Individual and team training
- Independent from weather and time limitations
- Flexible infrastructure for any further needs

R e a l i z m ! ! !



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Solution :

Realism - highest priority

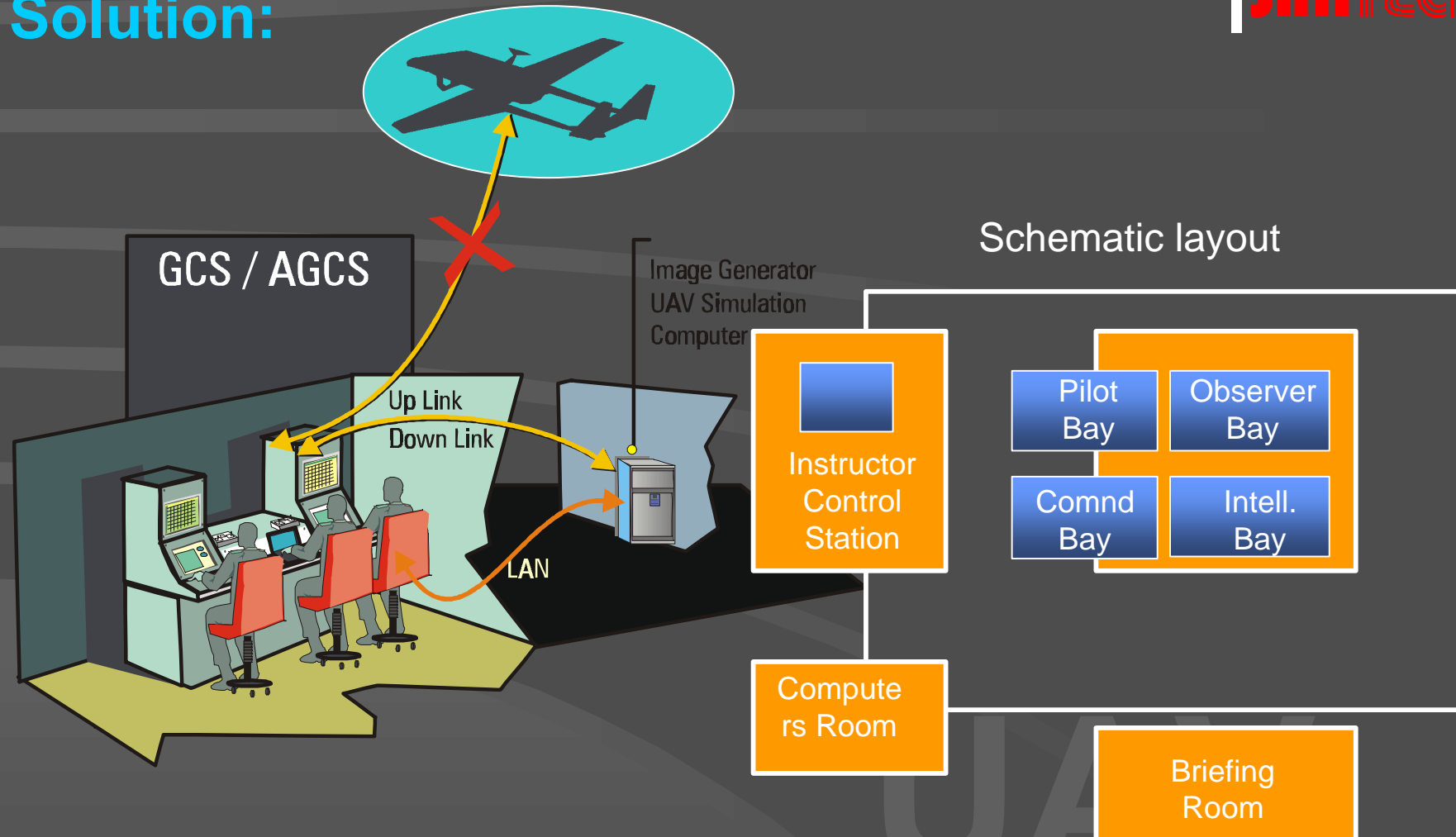
- Mission territories (Geo specific terrain data base)
- Training environment
- Natural behavior of the UAV (Flight profile)
- Targets and missions
- Levels and difficulties
- Emergencies and unexpected changes

UAV



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Solution:

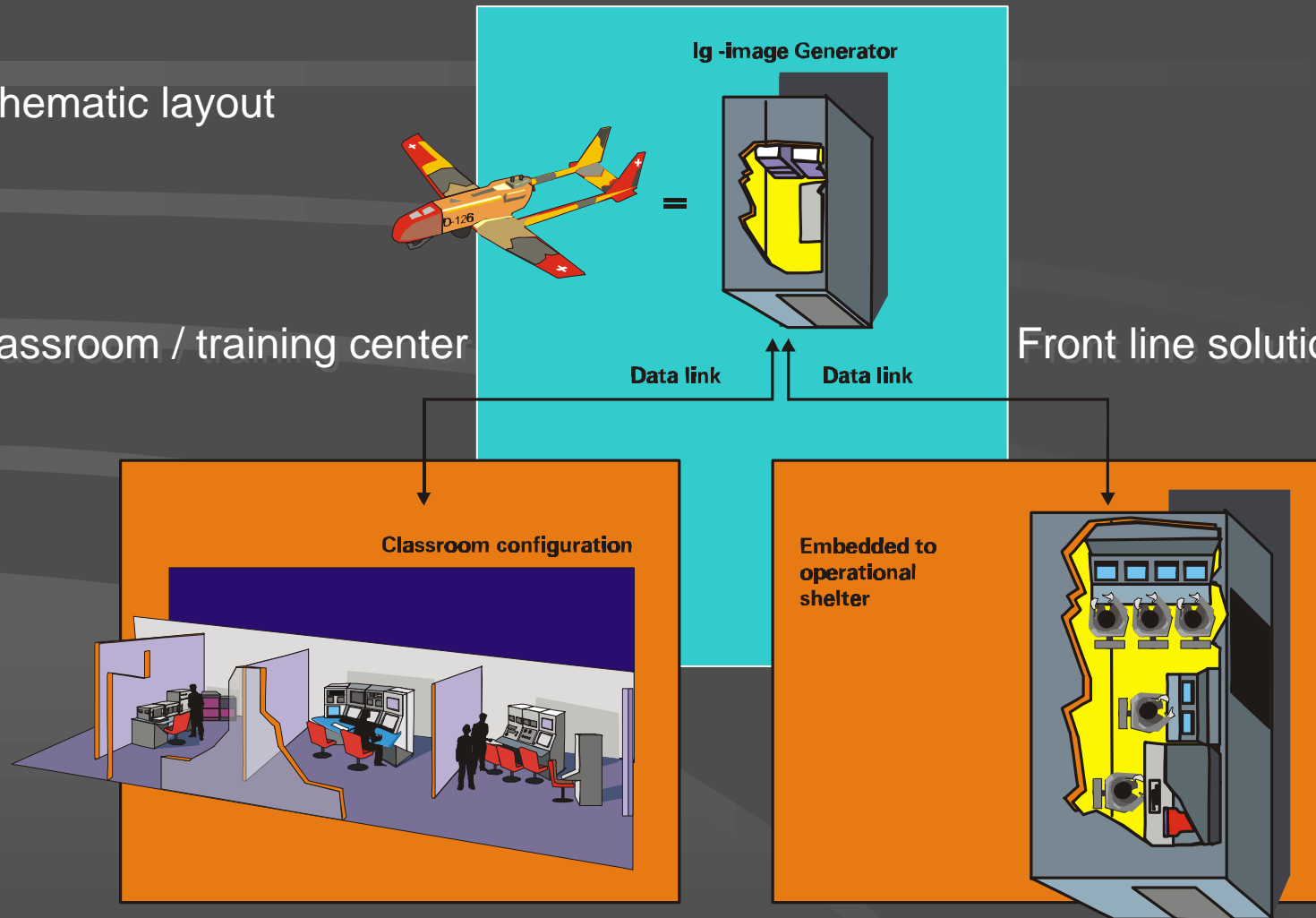


Solution:

Schematic layout

Classroom / training center

Front line solution





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Solution:

Classroom / training center



Front line solution



UAV

Solution:

Visual - What UAV is about..?

Details

Day

Night

Thermal

Accuracy

Targets

Effects



Instructor features

- Advanced control station
- Planning of training session
- Build an array of scenarios
- Full supervising of all actions
- After action review
- Event Marks
- Debriefing



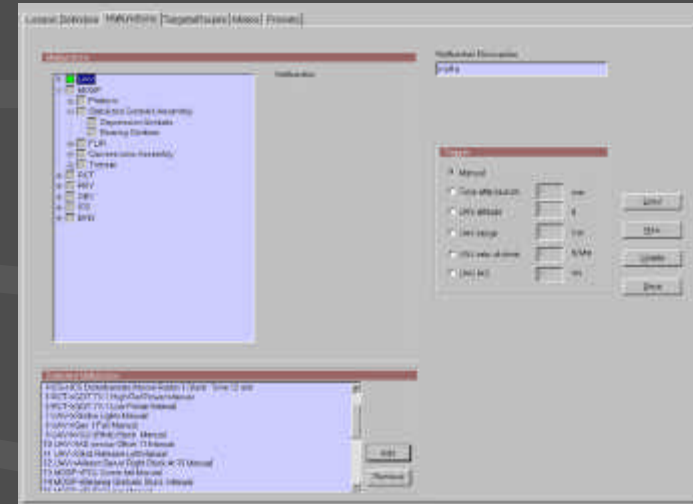
Trainees station



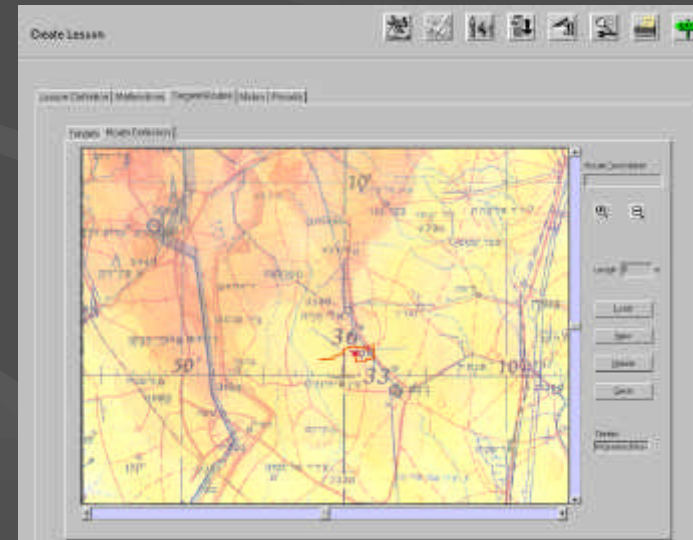
- 1:1 bays
- All is activating as in real life
- All instruments
- Separate rooms for other forces

UAV

- Bus voltage
- Engine cut
- Communication cut
- GPS + navigation mode cut
- Landing in tough weather condition
- More than 400 others



- Route
- Targets path
- Navigation points
- Ground stations
- Meteorology
- Time





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Visual Solut ion

UAV



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“ ... it should be real “

Don't know that there is no UAV in the air

- Effective training for the whole team
- Dedicated training for each discipline
 - Basic flight
 - Operation and combative flights
 - Support units
- Free from weather limitations, restricted areas, bureaucracy
- Student instruction and evaluation
- Doctrine and system evaluation
- Safety
- Saving

Better prepared - Better ready